

**Case 3197*****Glassia* Davidson, 1881 (Brachiopoda): proposed designation of *G. elongata* Davidson, 1881 as the type species**

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**Abstract.** The purpose of this application is to conserve the current usage of *Glassia* Davidson, 1881 and *Lissatrypa* Twenhofel, 1914 for two important genera of smooth-shelled Silurian brachiopods with radically different internal structure. Davidson designated *Atrypa obovata* Sowerby, 1839 as the type species of *Glassia*, but this species is now known from its internal structure, particularly its dorsally directed spiralia, to be a species of the genus *Lissatrypa* (type species *L. atheroidea* Twenhofel, 1914). To avoid synonymy between *Glassia* and *Lissatrypa*, and between the nominal families based on them, it is proposed that *Glassia elongata* Davidson, 1881, with medially directed spiralia, be designated as type of *Glassia*.

**Keywords.** Nomenclature; taxonomy; Brachiopoda; GLASSIIDAE; LISSATRYPIDAE; *Glassia*; *Lissatrypa*; *Glassia elongata*; *Lissatrypa atheroidea*; Silurian.

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1. Davidson (1881a, p. 11) established the nominal genus *Glassia* to include smooth atrypides of Silurian age with medially directed barrel-shaped spiralia and designated *Atrypa obovata* Sowerby, 1839 (p. 618, pl. 8, figs. 8, 9) as the type species. Later the same year he (Davidson, 1881b, p. 148) established the nominal species *Glassia elongata*, which he believed to be closely related to *Atrypa obovata* although he had not examined the spiralia of *A. obovata*. The internal structure of *Glassia elongata* is very different from that of *Atrypa obovata* in having medially directed spiralia, lacking pedicle collars, and with different teeth and delthyria (as pointed out by Glass in Davidson, 1881a, b), and these differences are so great that they may be assigned to different families.

2. Twenhofel (1914, p. 31) established the genus *Lissatrypa* for smooth atrypides having dorsally directed spiralia, with his new species *Lissatrypa atheroidea* (p. 33) as type species by original designation and monotypy. In the same paper Twenhofel (p. 31) established the subfamily LISSATRYPINAE to include smooth atrypides with dorsally directed conical spiralia (see also Copper, 1973). In 1929 Schuchert & LeVene (p. 20) established the subfamily GLASSIINAE, based on the interpretation of *Glassia* by Davidson, and typified by medially directed spiralia. Both subfamilies have been elevated to family rank as LISSATRYPIDAE and GLASSIIDAE, within the suborder Lissatrypidina Copper, 1996.

3. As part of my research in connection with the second edition of the *Treatise on Invertebrate Paleontology*, I sectioned specimens in British collections labelled as *Atrypa obovata* (the nominal type species of *Glassia*) and identical in size and shape to the specimen illustrated by Sowerby (1839, pl. 8, figs. 8–9) as *Atrypa obovata* from

Mathon Lodge, Malvern Hills. I discovered (Copper, 1996, pp. 919–922) that these shells of *A. obovata* possessed dorsally directed spiralia rather than the medially directed spiralia diagnostic of *Glassia* as described by Davidson (1881). Additionally, such shells of *A. obovata* possessed other internal characters such as muscle scars, the nature of the shell wall, dental cavities, pedicle callist and pedicle collar diagnostic of the generic characters shown by the type species of *Lissatrypa*, i.e. *Lissatrypa atheroidea* (see Copper, 1973). Since the type species of *Glassia* (*Atrypa obovata*) and of *Lissatrypa* (*L. atheroidea*) have the same internal structure diagnostic for *Lissatrypa*, the species are congeneric and *Lissatrypa* is a junior subjective synonym of *Glassia*. Had Davidson been aware in 1881 of the internal features of *Atrypa obovata* he doubtless would not have designated it as the type species of *Glassia*, which he stated had the primitive character of medially directed spiralia.

4. To resolve the problem of synonymy between the two important and well-recognized genera *Glassia* and *Lissatrypa*, and the family-group taxa based on them, I propose that *Glassia elongata* Davidson be designated as type species of *Glassia*, to replace the species *Atrypa obovata* originally designated by Davidson. This accords with the intention of Davidson (1881), Schuchert & LeVene (1929) and others who diagnosed the genus *Glassia* as having medially directed spiralia as seen in *Glassia elongata*.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Glassia* Davidson, 1881 and to designate *Glassia elongata* Davidson, 1881 as the type species;
- (2) to place the following names on the Official List of Generic Names in Zoology:
  - (a) *Glassia* Davidson, 1881 (gender: feminine), type species by designation in (1) above *Glassia elongata* Davidson, 1881;
  - (b) *Lissatrypa* Twenhofel, 1914 (gender: feminine), type species by original designation and monotypy *Lissatrypa atheroidea* Twenhofel, 1914;
- (3) to place the following names on the Official List of Specific Names in Zoology:
  - (a) *elongata* Davidson, 1881, as published in the binomen *Glassia elongata* (specific name of the type species of *Glassia* Davidson, 1881);
  - (b) *atheroidea* Twenhofel, 1914, as published in the binomen *Lissatrypa atheroidea* (specific name of the type species of *Lissatrypa* Twenhofel, 1914).

## References

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